# KORONA CAMERAS

LENSES, PHOTO-GRAPHIC GOODS



## GUNDLACH OPTICAL COMP'Y

753-765 CLINTON AVE SOUTH ROCHESTER, NEW YORK In the presentation of another edition of our Photographic Catalogue an opportunity is given us to announce that we are now making a more complete line of photographic outfits, having recently made many additions to our already first-class plant. Our Camera department is equipped with the latest and best tools and appliances to be had for the purpose, and our product is unsurpassed.

As compared with our previous offerings, there are many changes in the Lenses, Cameras, and Shutters, which have improved their general excellence and popularity. We have this year added to our former styles a Long Focus Reversible Back Camera in the cycle form and also two styles of View Cameras. The prices throughout will be found very reasonable, and we guarantee the workmanship and optical performance to be unexcelled. We solicit a comparison with any apparatus in the market.

We were the first company in this country to make a complete Photographic Camera, Lens, and Shutter, all of our own manufacture. In the line of manufacturing the complete apparatus, we were thus first in the field, and we intend still to maintain the lead. We employ only skilled labor, and use the best materials in all our goods, and no concern is better equipped for the production of first-class apparatus.

Our Lenses have long been favorably known, and are in use in all parts of the world. We are abreast of the modern improvements in optics, and we especially call attention to the Turner-Reich Anastigmat Lens as absolutely unsurpassed.

The importance of reliable Lenses for any grade of Photographic work should not be overlooked. No matter how fine a Camera, how beautiful the view upon which it is focused, a poor lens will defeat the best effort of the most skillful operator; in fact, "It's all in the lens." In the mad race for cheapness, many outfits are offered in which the Lens is incapable of really satisfactory work. The important fact that we make the Entire outfit, and the economy incident upon a complete factory enables us to make the most favorable terms.

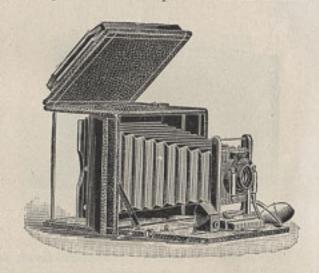
GUNDLACH OPTICAL COMPANY. ROCHESTER, N. Y.

### Korona Camera—Series I

This Camera embodies the very latest improvements, and has all adjustments required for any photographic work. No expense has been spared to make it hand-

some, convenient, complete, and the finest possible from a well equipped factory. The very best materials are used throughout; the wood is finely polished mahogany, while all the brass parts are finished and nickel-plated; the bellows and covering are of the best leather for the purpose.

Three double plate-holders may be carried in the back, two of which are held in our patented plate-holder carrier. There is a rack and pinion for fine focusing, and double sliding front and double swing-back. When focusing on the ground glass the whole



ground glass may be exposed to view, as the back of the Camera folds over the top, as shown in the cut. The Camera is fitted with two tripod sockets and a reversible viewfinder, covered with a hood. Our patent focusing back supplies both focusing cloth and magnifying glass. It is detachable and may be removed when not in use.

Lenses.—The Korona I can be fitted with any of our lenses; but we especially recommend either our Instantaneous Symmetrical or the Series IV Turner-Reich Anastigmat.

Shutter.—The Shutter for 4 x 5 and 5 x 7 is "Model D" and for 6½ x 8½ "Model C."

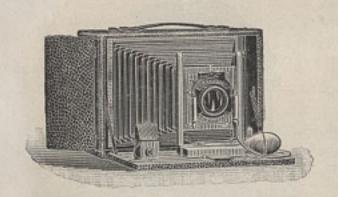
Plate-holder.—Our new Improved Korona holder is used, with hard rubber slides. Sizes.—The size of the 4 x 5 is 7½ x 4½ x 6½, and it weighs only 3½ pounds. The 5 x 7 is 9½ x 5½ x 7, and weighs only a trifle over 4 pounds. The 6½ x 8½ is 11½ x 6½ x 9½, and weighs 7 pounds.

### PRICE Including Camera, Lens, and Shutter, and one Plate-holder.

Korona, fitted with Instantaneous Symmetrical Lens,	4×5 \$25 00	5 × 7 \$32 00	61 x 81 \$ 40 00
Korona, fitted with Turner-Reich Lens,	45 00	57 00	100 00
Symmetrical Wide-angle Lens, extra,	8 00	10 00	12 00
Without Lens or Shutter,	15 00	20 00	25 00
Extra Plate-holders,	I 00	I 25	I 60
Sole-leather Case,	3 50	4 00	4 50
Cartridge Roll-holder, empty,	5.00	6 50	

### Korona Camera—Series I-A

This camera is an instrument of convenience and capacity at a very moderate price, and has proved very popular. It has double sliding front and a single swing.



A rack and pinion for focusing is provided at an extra charge, if desired. When closed, the working parts are entirely concealed from view.

The ground glass is concealed from view by a door in the back which, when open, hangs down out of the way.

There is an accurately graduated focusing scale, for use whenever it is not convenient to focus on the ground glass.

The finder is shaded by a metal hood, and is reversible for inspecting either horizontal or vertical views.

There is room in the back of the box for three plate-holders.

Lenses.—This camera is fitted with Single Achromatic, Instantaneous Symmetrical, or Turner-Reich Anastigmat,

Shutter.—With the Single Achromatic Lens, Shutter "B," page 35, is furnished. With Instantaneous Symmetrical or Turner-Reich Lenses, "Model D" Shutter, page 37.

Plate-holder.—The plate-holder is our Korona holder, and is provided with hard rubber slides.

Size.—The  $4 \times 5$  is  $4\frac{5}{8} \times 5\frac{1}{2} \times 7$ , weighs  $2\frac{1}{2}$  pounds;  $5 \times 7$  is  $9\frac{1}{4} \times 5\frac{1}{4} \times 6\frac{5}{4}$ , weighs 4 pounds.

#### PRICE

#### Includes Camera, Lens, Shutter, and one Plate-holder.

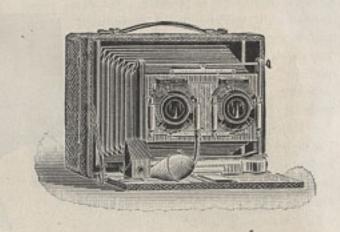
				4×5	5 × 7
Korona I-A Camera with Single Achromatic Lens,				\$13 00	\$20 00
Korona I-A Camera with Instantaneous Symmetrical Lens		45		16 00	23 00
Korona I-A Camera with Turner-Reich Lens,				36 00	48 00
Extra for rack and pinion for fine focusing,				2 00	2 00
Symmetrical Wide-angle Lens, extra,				8 00	10 00
Without Lens and Shutter,				10 00	17 00
Extra Plate-holders,				I 00	I 25
Extra Plate-holders,				3 50	4 00
Sole-leather Case,			339	5 00	6 50
Cartridge Roll Holder,	-		- 1		

### Korona Stereoscopic Camera

Stereoscopic Photography has recently become more popular. It is one of the most interesting branches of the art science. We have arranged the 5 x 7 sizes of the

Series I and Series I-A Korona for Stereo Work. The front is much wider than usual and the partition in the bellows is detachable and can be readily removed. The regular lens and shutter and the Stereo lenses are on separate front boards so that the change for stereo or for full sized views can be made very quickly.

These cameras have all the features of the Series I or Series I-A. and are fitted with rack and pinion for fine focusing.



Lenses.—We suppty as Stereo lenses, matched pairs of our 4 x 5 Single Achromatic, Symmetrical or Turner-Reich Lenses. The Instantaneous Symmetrical 5 x 7 lens and shutter is furnished for full size views.

The Shutter consists of two of our "D" Shutters so arranged that both work simultaneously. See page 38.

The Price includes regular lens and shutter for full size views, and the Stereo Lenses and Shutter, and one Plate-holder.

#### PRICE

#### Includes Lens and Shutter, Stereo Lenses and Shutter, and Plate-holder.

Korona	Stereo	Series	I, Sing	le A	chi	roma	tic I	Len	ses,			+				\$50	00
- 11	+1	+6	I, Sym	meti	rica	l Le	nses	, .						(0)		60 (	00
14	44	- 64	I, Tur	ner-l	Rei	ch I	ense	s,						+		100	00
11	- 11	44	I-A, Si	ngle	A	chron	matic	L	ens	es,						40 (	00
16	**	44	I-A, S	ymm	etri	cal :	Lens	es,			5					50 0	00
"	- 66	**	I-A, T	urne	r-R	eich	Let	ises	,							90 0	00
Without	t Lens	or Shu	tter,										*			20 (	00
Extra P	late-hol	ders,														I:	25
Sole-leat	ther Ca	se, .														4 9	
Cartridg	e Roll-	holder,	empty													6	50

### Korona Camera—Series I-B

This camera is made with the same care as our other cameras, and is intended to meet the wants of those who wish a cheaper camera than the I-A, yet with as

many conveniences as possible. We are sure that it will be found exceedingly satisfactory in operation. It has mahogany finish; all the metal parts are nickel plated. Korona I-B is the most desirable camera for the amount invested.

It has the rising and falling front, but no swing-back. The movable front adds much to the value of this camera, and allows the operator to control the area of the plate in a manner impossible with a stationary front.

A carefully graduated focusing scale
is provided, for use without focusing on the ground glass, and in all cases is this scale
tested as to its accuracy. A Roll Holder for films cannot be fitted to this style box.

Lenses.—The Korona I-B is supplied with either our Single Achromatic Lens or our Instantaneous Symmetrical Lens, as per prices below.

Shutter.—This camera is equipped with our new "B" Shutter, made especially for it, which gives every advantage, including instantaneous, time, and bulb attachment, and the iris diaphragm. It is very simple in construction and yet very durable and will not easily get out of order, and gives advantages usually found only on cameras of much higher price.

Plate-holders .- Our Korona Holder is used with hard rubber slides.

Size.—The size of the 4 x 5 is 4\(\frac{1}{4}\) x 5\(\frac{1}{4}\), and it weighs only 2\(\frac{1}{4}\) pounds. The 5 x 7 is 5 x 6\(\frac{1}{4}\) x 9, and weighs only 3\(\frac{1}{4}\) pounds. While light in weight, all parts are strongly made.

#### PRICE

#### Includes the Camera, Lens, Shutter, and one Double Plate-holder.

	4×5	5 × 7
Korona I-B Camera, with Single Achromatic Lens,	\$10 00	\$15 00
Korona I-B Camera, with Instantaneous Symmetrical Lens,	14 00	19 00
Extra Plate-holders,	I 00	I 25
Without Lens and Shutter,	7 00	9 00
Sole-leather Case,	3 50	4 00

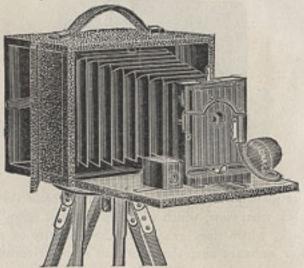
### -Korona Camera—Series I-C

This Camera is as carefully made as our other cameras, having the same size and style box as our I-A and I-B. It is intended to meet the wants of those who wish a similar instrument but at a lower price. The box is made to carry three

plate-holders. It has fine morocco grain leather covering, and mahogany finish. When closed, all the working parts are concealed within the camera box,

The ground glass is concealed from view by a door in the back which, when open, hangs down out of the way. The ground glass itself is easily removable.

There is an accurately graduated focusing scale, for use whenever it is not convenient to focus on the ground glass.



The finder is reversible for inspecting either horizontal or vertical views. Two tripod sockets are provided.

A Roll Holder for films cannot be fitted to this style box.

The Lens.—This most important part of the camera is our fine single Achromatic lens, and will take landscapes, portraits, or interiors. It will make a sharp and brilliant picture. A set of diaphragms are conveniently placed.

The Shutter is of special design, fitted with pneumatic and finger release, and is arranged for time, bulb, and instantaneous exposure.

Size.—This camera is made only in the 4 x 5 size, which is  $4\frac{\pi}{4}$  x 7 x 5\frac{3}{3}, and weighs only  $2\frac{1}{2}$  pounds.

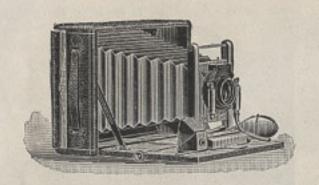
#### PRICE

#### Includes the Camera, Lens, Shutter, and one Double Plate-holder.

																4 X 5
Korona I-C Camera,	wi	ith	Si	ngle	1	Ach	ron	nati	c 1	Len	s,					\$7 00
Extra Plate-holders,																1 00
Sole-leather Case, .																3 50

### Korona Camera—Series II

This elegant folding camera is designed especially for the cyclist and tourist. It differs only from the Korona I in being more compact, a novel arrangement



permitting all the space usually given to extra holders to be saved. The best selected mahogany is used in its construction, and it is covered with fine seal grain leather. The metal parts are highly finished and nickel plated, giving a most elegant appearance.

The back is held in position by a spring, and does not need to be removed to insert

the plate-holder. A hinged cover conceals the ground glass and our patent focusing back from view, which when open drops down out of the way when using the patent back, which does away with the necessity of a focusing cloth or a magnifying glass. For ordinary snap-shot work an accurate focusing scale is provided.

It has double sliding front, and a double swing-back; it has two plates for use on a tripod, and is provided with rack and pinion for focusing. The hooded view-finder is reversible.

Lenses.—Either our well-known Instantaneous Symmetrical or the superb Series IV Turner-Reich Anastigmat is fitted when desired.

Shutter .- The shutter is the "Model D."

Plate-holder is our Korona holder, with hard rubber slides.

Carrying-case.—A fine sole-leather carrying case and strap is provided with each outfit, in either of two sizes, one having a compartment for the camera and a second compartment for five double plate-holders; the other has a compartment for the camera and three plate-holders.

Sizes.—The  $4 \times 5$  camera is  $5\frac{1}{4} \times 6\frac{1}{4} \times 2\frac{1}{2}$ , and weighs less than two pounds; the  $5 \times 7$  is  $6\frac{1}{4} \times 7\frac{1}{4} \times 2\frac{1}{2}$ , and weighs about two pounds.

#### PRICE

#### Includes one Double Plate-holder and Carrying-case, complete.

				4×5	5×7
Korona II Camera, with Instantaneous	Symmetrical	Lens,		\$25 00	\$32 00
Korona II Camera, with Turner-Reich					57 00
Symmetrical Wide-angle Lens, extra,					10 00
Without Lens or Shutter,					20 00
Extra Plate-holders,					I 25
Cartridge Roll Holder,					6 50

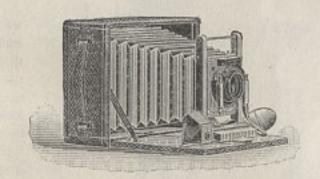
### Korona Camera-Series II-A

This camera is of the same design as the preceding series, the principal difference being the omission of the rack and pinion for focusing, and the swing back. Selected

mahogany is used in the construction of the box, and it is covered with a fine seal grain leather.

The metal parts are highly polished and nickel-plated. In contrast with the rich mahogany, gives an elegant appearance.

As in Series II, the back is held in position by a spring, and does not need to be removed to insert the plate-holder. A hinged cover, when closed, conceals the



ground glass and our patent focusing back from view, and when open falls down out of the way when using the patent back, which does away with the necessity of a focusing cloth or a magnifying glass. Ordinary snap-shot or view work may be focused readily by means of the accurate focusing scale, which serves well for all objects at from 6 feet to 100 feet.

The camera has a double sliding front, and two plates for tripod screw.

Hooded view-finder is provided so that the image can easily be seen, even in the sunlight.

Lenses.—This camera is fitted with either our Instantaneous Symmetrical lens or the Turner-Reich Anastigmat.

Shutter .- Our regular Korona Shutter, "Model D," is furnished with this camera.

Plate-holder is our Korona holder, with hard rubber slides.

Carrying-case.—A fine sole-leather carrying case and strap is provided with each outfit, in either of two sizes, one holding the camera and five double plate-holders, while the other has a compartment for the camera and three plate-holders.

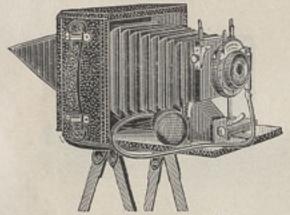
#### PRICE

#### Includes Camera, Lens, one Double Plate-holder, and Carrying-case, complete.

										4 X 5	5×7
Korona II-A Camera, with Instantane	our	s S	ym	met	ric	al l	Len	s,	+	\$16 00	\$23 00
Fitted with Turner-Reich Lens,										36 00	48 00
Symmetrical Wide-angle Lens, extra,										8 00	10 00
Without Lens or Shutter,										10 00	17 00
Extra Plate-holders,										1 00	I 25
Rack and Pinion, extra,										2 00	2 00
Cartridge Roll Holder,										5 00	6 50

### Korona Camera—Series II-B

This form of the Korona is the same as the II and II-A, and is made specially for bicyclists, tourists, or others, to whom extreme compactness is the chief object,



The Korona II-B, showing focusing shield over ground glass.

without incurring of great expense.

A novel arrangement of the back is with the use of a rising spring door in combination with neat side curtains, so that this camera may easily be held in the hand and the image clearly seen on the ground glass without the use of a focusing cloth. This improvement will be appreciated.

The Korona II-B has grain leather covering, elegant polished mahogany finish, and nickel-plated brass parts. The shutter has iris diaphragm, with engraved f numbers.

The front rises and falls, and there is a fine hooded reversible finder, as well as tripod sockets for vertical and horizontal exposures.

The Lens.—The Korona II-B is supplied with either our Single Achromatic Lens or our Instantaneous Symmetrical Lens, as per prices below.

Shutter.—This camera is equipped with our new "B" Shutter, made especially for it, which gives every advantage, including instantaneous, time, and bulb attachment, and the iris diaphragm. It is very simple in construction and yet very durable and will not easily get out of order, and gives advantages usually found only on cameras of much higher price.

Plate-holders,-Our Korona holder is used with hard rubber slides.

Carrying-Case.—A fine leather covered carrying-case, and strap is provided with each outfit to hold the camera and three plate-holders.

Size.—The size of the 4 x 5 is  $2\frac{1}{2}$  x  $5\frac{1}{2}$  x  $6\frac{1}{2}$ , and it weighs only two pounds. The 5 x 7 is  $2\frac{\pi}{4}$  x  $6\frac{1}{2}$  x  $8\frac{1}{4}$ , and weighs only  $3\frac{1}{2}$  pounds. While light in weight, all parts are strongly made.

#### PRICE

#### Includes the Camera, Lens, Shutter, and one Double Plate-holder.

	31 × 41	4×5	5 X 7
Korona II-B Camera, with Single Achromatic Lens,	\$10 00	\$10 00	\$15 00
Korona II-B Camera, with Instantaneous Symmetrical Lens,	14 00	14 00	19 00
Extra Plate-holders,	I 00	I 00	I 25
Sole-leather Case,	3 50	3 50	4 00
Cartridge Roll Holder,		5 00	6 50

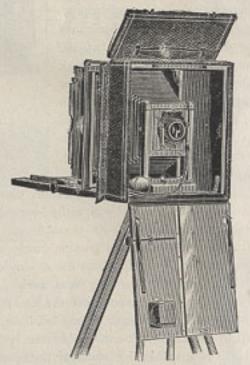
### Korona Long-Focus Camera--Series VI

The Korona Long-Focus is the best form of hand camera, and fully meets the requirements of both the expert amateur and professional photographer. While it possesses the compact and convenient features of the hand camera, and may be used with ease for "snap shots," it has also all the useful adjustments of the very best tripod or view camera, with advantages peculiar to itself. It may be defined as practically a universal camera, having every facility and adjustment for view work and instantaneous photography. It is especially adapted for copying and enlarging, a most fascinating branch of the "art science."

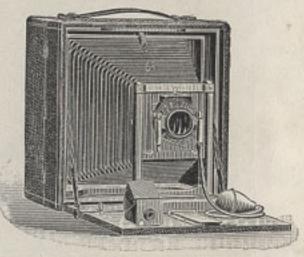
It is made of the very best of materials throughout, the mahogany woodwork being finely polished, while all brass parts are finished and nickel-plated. Indeed the camera is first-class in every way, and has been well received by amateurs and professionals alike.

In addition to its specially fine construction, the distinguishing peculiarity of the Korona Long-Focus Camera is its unusual bellows capacity—more than double the ordinary draw is conveniently available without any sacrifice of strength or convenience. The focal capacity of the 4 x 5 is 17 inches; of the 5 x 7, 23 inches; of the 6½ x 8½, 31 inches; of the 8 x 10, 36 inches.

Convenience,—The Korona Long-Focus has every modern improvement and convenience. The back is quickly reversible, so that upright pictures may be made without changing position of the camera.



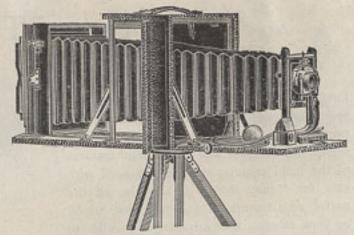
Long-Focus Korona as used with Wide-angle Lenses.



Long-Focus Korona as ready for ordinary view work.

It has double sliding front, also double swing-back. The rack and pinion on both the front and back bed is very convenient for fine focusing.

Both the front and back drop to a horizontal position, and form a bed for the extension of the bellows in using longfocus lenses, enlarging or copying. Either front or back may be dropped down out of the way when it is desired to work close up to the ground glass, or in using a wide-angle lens. Both of these positions are indicated in the engravings. There is also a door at the top and on the side, for further convenience.



Long-Focus Korona, fully extended.

Lenses.—One of the features peculiar to the Korona Long-Focus is the superb lens system. We fit it with either our celebrated Turner-Reich Anastigmat or our Rapid Rectigraphic Lens. Both these lenses are made in the convertible form, i. e., so that either front or back combination can be used alone. The separate combinations of these lenses are fully corrected for use as single lenses, and used in this way they give the most satisfactory results for long focus work.

A long-focus camera with the lens of ordinary construction, where the combinations are of equal focal length, afford but little, if any, advantage over the usual style of camera, but by the use of our convertible lens system, the full range of the camera is brought into play. It is within the power of the operator, in so far as lenses or camera can aid, to accomplish results not within the reach of an ordinary outfit,



Made with Double Lens.

The Turner-Reich Lens which we fit to this camera is same as Series II-S, see page 22, for the focal lengths of the double and single combinations. The Rectigraphic Lens which is furnished with this camera is same as Series VII-S. See page 28 for the focal lengths of the combinations.

The 5 x 7 Turner-Reich Lens of the Series II-S has an equivalent focus of 7½ inches, while the back combination has a focus of 12 inches, and the front combination has a focus of 18 inches. In addition to the above, we can also furnish a separate combination of 10-inch focus, which, used in connection with the 12-inch combination, gives a wide-angle lens of 5½ inches focus. When the 10-inch



Made with Back Combination.

combination is used in connection with the 18-inch combination, a lens of 7 inches equivalent is obtained. It will thus be seen that the lenses furnished with this outfit have 10, 12, and 18 inches in single lenses, and combinations of double lenses can be had with equivalent focal lengths of 5½, 7, and 7½ inches. Thus, from the same point, six sizes of pictures may be made of any object without moving the camera.

With the Rectigraphic Lens about the same range of foci can be had as with the

Turner-Reich Lens. In addition to the Rectigraphic Lens, if desired, we can furnish a set of wide-angle symmetrical lenses in cells, which are mounted so that they may be used interchangeably in the shutter with the regular Rectigraphic Lens. These are our Series XI having an angle of 80 to 85 degrees.

In using a single combination of either the Turner-Reich or Rectigraphic Lens, the combination used must always be placed back of the diaphragm; that is, in the back of the Shutter,

The  $4 \times 5$  Camera is  $7\frac{1}{2} \times 6\frac{8}{8} \times 7\frac{8}{4}$ , and weighs  $4\frac{1}{4}$  pounds; the  $5 \times 7$  is  $9\frac{1}{4} \times 6\frac{1}{4} \times 9\frac{8}{4}$ , and weighs 6 pounds; the  $6\frac{1}{4} \times 8\frac{1}{4}$  is  $11\frac{1}{4} \times 7\frac{8}{8} \times 12\frac{1}{8}$ , and weighs 12 pounds; the  $8 \times 10$  is  $8\frac{1}{4} \times 13\frac{1}{4} \times 13\frac{8}{4}$ , and weighs 15 pounds.

Shutter. — The Model "D" Shutter is used with all its advantages, including the iris diaphragm, and as per page 28, the f values of the openings for single combinations



Made with Front Combination,

are engraved on the mount, so that there is the utmost possible ease and facility in using the various combinations. "Model C" Shutter is supplied for the  $6\frac{1}{2} \times 8\frac{1}{2}$  and  $8 \times 10$ .

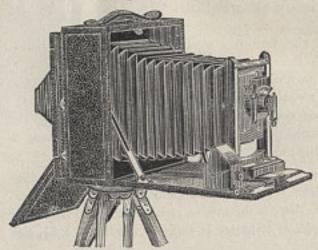
The Plate-holder is our Korona holder, with hard rubber slides. There is space in the back of the camera for three holders. When two extra plate-holders are ordered we supply a leather covered case or carrier for two holders, this carrier protects the holders from the light and is very convenient and useful.

PRICE
Complete with Lens, Shutter, and one Plate-holder.

4×5	5×7	61 x 81	8 x 10
\$35 00	\$45 00	\$60 00	\$75 00
40 00	50 00	65 00	80 00
8 00	10 00	12 00	15 00
30 00	40 00	50 00	60 00
3 50	4 00	5 00	6 50
60 00	85 00	120 00	150 00
	15 00		
1 00	I 25	I 60	2 00
5 00	6 00	7 00	8 00
	\$35 00 40 00 8 00 30 00 3 50 60 00	\$35 00 \$45 00 40 00 50 00 8 00 10 00 30 00 40 00 3 50 4 00 60 00 85 00 15 00 1 00 1 25	\$35 00 \$45 00 \$60 00 40 00 50 00 65 00 8 00 10 00 12 00 30 00 40 00 50 00 3 50 4 00 5 00 60 00 85 00 120 00 15 00 1 00 1 25 1 60

### Korona Cycle Long-Focus---Series VII

This style of the Long-Focus is essentially the same as the Series VI except that there is no space at the back for holding the plate holders thus making it more compact. It is designed and made in this style to meet the needs of those who desire the extra long bellows of the Long-Focus but in a compact form.



It is made of the very best of materials throughout, the mahogany woodwork being finely polished, while all brass parts are finished and nickelplated.

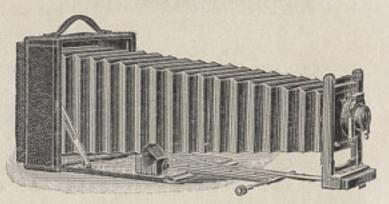
The distinguishing peculiarity of the Korona Cycle Long-Focus Camera is its unusual bellows capacity—more than double the ordinary draw is conveniently available without any sacrifice of strength or convenience. The focal capacity of the 4 x 5 is 16½ inches; of the 5 x 7, 22 inches, of the 6½ x 8½, 27 inches.

Convenience.—The Korona Cycle Long-Focus has every modern improvement and convenience. It has double sliding front, also swing-back. A rack and pinion for fine focusing.

It has a triple telescopic front which drops to a horizontal position, and forms a bed for the extension of the bellows in using long-focus lenses, enlarging or copying.

The back is reversible so that either vertical or horizontal pictures may be made without changing the position of the camera on the tripod.

Lenses.—One of the features peculiar to the Korona Cycle Long-Focus is its superb lens system. We fit it with either our celebrated Turner-Reich Anastigmat or our Rapid Rectigraphic Lens. Both these lenses are made in the convertible form, i.e., so that either front or back combin-



ation can be used alone. The separate combinations of these lenses are fully corrected for use as single lenses, and used in this way they give the most satisfactory results for long-focus work.

A long-focus camera with the lens of ordinary construction, where the combinations are of equal focal length, afford but little, if any, advantage over the usual style of camera, but by the use of our convertible lens system, the full range of the camera is brought into play. It is within the power of the operator, in so far as lenses or camera can aid, to accomplish results not within the reach of an ordinary outfit.

The Turner-Reich Lens which we fit to this camera is same as Series II-S, see page 22, for the focal lengths of the double and single combinations. The Rectigraphic Lens which is furnished with this camera is same as Series VII-S. See page 28 for the focal lengths of the combinations.

In addition to the above, we can also furnish a separate combination of 10-inch focus, which, used in connection with the 12-inch combination, gives a wide-angle lens of 5½ inches focus. When the 10-inch combination is used in connection with the 18-inch combination, a lens of 7 inches equivalent is obtained. This will give 10, 12, and 18 inches in single combinations, and double lenses with equivalent focal lengths of 5½, 7, and 7½ inches. Thus, from the same point, six sizes of pictures may be made of any view without changing position of the camera.

Shutter.—The "Model D" Shutter is used, with all its advantages, including the iris diaphragm, and as per page 37, the f values of the openings for single combinations are engraved on the mount, so that there is the utmost possible ease and facility in using the various combinations. "Model C" Shutter is supplied for the  $6\frac{1}{2} \times 8\frac{1}{2}$ , size of this camera.

The Plate-holder is our Korona holder, with hard rubber slides.

Carrying-case.—A fine sole-leather carrying-case and strap is provided with each outfit, in either of two sizes, one having a compartment for the camera and a second compartment for five double plate-holders; the other has a compartment for the camera and three plate-holders.

Sizes.—The 4 x 5 camera is  $3\frac{1}{2} \times 6\frac{5}{8} \times 6\frac{5}{4}$ , and weighs less than 3 pounds; the 5 x 7 is  $4\frac{1}{4} \times 8\frac{1}{2} \times 8\frac{7}{8}$ , and weighs about  $4\frac{1}{2}$  pounds.

#### PRICE

#### Includes one Double Plate-holder and Carrying-case, complete.

Korona Long-Focus Symmetrical Lens,		4 × 5 \$35 00	5 × 7 \$45 00	6} x 8} \$60 00
Korona Long-Focus Rectigraphic Lens,			50 00	65 00
Wide-angle Lens, extra,			10 00	12 00
Without Lens and Shutter, ,		30 00	40 00	50 00
Korona Long-Focus, Turner-Reich Anastigmat,		60 00	85 00	120 00
Special 10" T. R. Wide-angle Lens,			15 00	
Extra Plate-holders,		I 00	I 25	1 60

### Korona Camera—Series X

This is a thoroughly up-to-date and most useful camera at a marvelously low price. It is of the "fixed focus" type, requiring no focusing, and has been made as small as

possible in any fixed-focus 4 x 5 camera.



This camera has fine morocco-grain leather covering, the same as the best cameras, and looks as well as the highest priced cameras. It has a leather handle. One plate holder is furnished with each camera, but it will hold three.

There are two view-finders, so that a picture may be taken either horizontally or vertically. It also has two tripod plates.

There is a door in the back for focusing on the ground glass. The size is only  $5\frac{8}{5} \times 8 \times 7\frac{1}{8}$ , and the weight is less than two pounds. The plate-holders will hold any standard size plate.

Lens.—The Korona X has our well known Single Achromatic Lens, which is sufficient guarantee of the results that may be obtained. It is quick, with great depth of focus, and will be found very satisfactory.

Shutter.—It has a rapid safety Shutter, which can be set for time, instantaneous, or quick-time release. The quick-time release has not before been put on so cheap a camera, being heretofore a feature of high-priced cameras, on which it corresponds to the bulb release of the pneumatic shutters.

Plate-holder.-Our new Korona Plate-holder is used which has hard rubber slides,

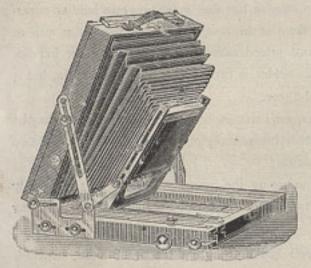
#### PRICE

#### Includes One Korona Plate-holder

Korona X Camera, 4 x 5,								4	7	\$5	00
Extra Plate holder										1	00

### Korona Compact View Camera

This camera contains every movement necessary to view or architectural photography, combined with the utility of working parts, compactness, light-weight and beauty of finish.

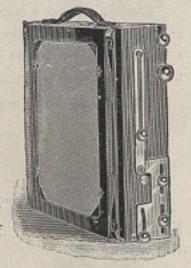


After experimenting for a long time we have eliminated all the poor features of this style camera, and made many improvements.

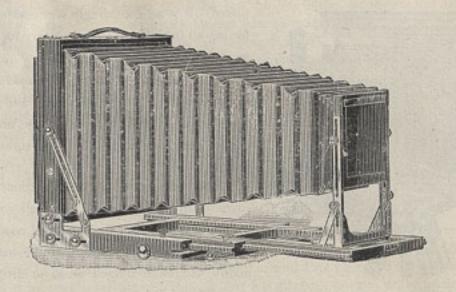
When the camera is opened the front is pulled forward and swings in to position automatically, being locked in place by two set screws. A rough focus is acquired by sliding the front backward or forward on a metal bed. When adjusted the front is instantly locked by turning a lever

to one side. The fine focus is then adjusted by a rack and pinion conveniently placed. The bed is triple telescopic and an extra long bellows is provided which allows

the use of very long-focus lenses. A unique feature is the swing back, both vertical and horizontal are provided and both swing from the center and so do not disturb the focus as is the case when the swing is out of center, a fault found in all cameras of this design heretofore put on the market. The most extreme wide-angle lens can be used, the back being made to slide forward enough to prevent the bed cutting off a portion of the plate. The rising front has a range of 4 inches which is more than sufficient for every need. The back is reversible and is fitted with a spring actuated ground glass which recedes for the insertion of the plate holder.



The Compact is made of the best mahogany, handsomely finished, and all the metal parts are nickel-plated and polished. A leather handle is provided so the camera may be carried without case. Lenses.—With this camera we furnish our Instantaneous Symmetrical Lens, Series IX-S, the Rapid Rectigraphic Convertible, Series VII-S, or the Turner-Reich Anastigmat Convertible, Series II-S, at prices listed below.



#### Length of Bellows or Focal Capacity and Size

Size	Focal capacity	Size of Camera
6½ x 8½	24 in.	10 x 2 x 10 in.
8 x 10	30 in.	115 x 28 x 13 in.

#### PRICE

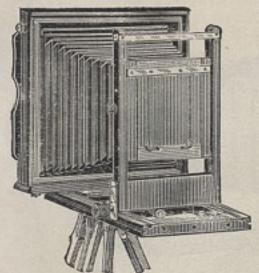
#### Includes Canvas Carrying Case, one Korona Holder but no Tripod or Lens.

The Compact Cameras are supplied with either a case to hold camera and three holders or a long case to hold camera, three holders and tripod. In ordering, state which style is desired. There is room in either case for lens and shutter.

				6 <del>1</del> x	81		8 x	10
Korona Compact View without Lens and Shutter,				\$ 36	00	\$	40	00
Korona Compact View and Symmetrical Lens,		1		60	00		70	00
Korona Compact View and Rectigraphic Lens, .		1		65	00		75	00
Korona Compact View and Turner-Reich Lens,	*			120	00	1	40	00

### Korona View Camera

This camera is of simpler construction but eminently suitable for professional use. It is made of best mahogany handsomely finished, and all the metal parts are nickel



plated. It is an exceedingly serviceable camera having all the adjustments necessary for general work and at a moderate price.

It is focused by moving the front forward or backward by means of a rack and pinion. The front is held in position by turning a milled head inside of the one turning the pinion.

The bed is made in three sections on account of the exceptionally long bellows. One section of the bed is detachable and need not be used except for lenses of very long focus. The middle section is hinged so as to drop down

out of the way when using wide-angle lenses. The front has an extreme rise and fall, a very desirable feature for architectural photography. The Korona View is fitted with vertical and horizontal swings, both working from the center. The back is reversible and has spring actuated ground glass frame. It contains every desirable movement with compactness and strength and is an ideal camera for copying or indoor work.

#### Length of Bellows or Focal Capacity and Size

Size	Focal Capacity	Size of Box
6½ x 8½	19½ in.	11 x 11 x 3\frac{1}{2} in.
8 x 10	23 in.	12½ x 12½ x 3½ in.

#### PRICE

#### Includes Canvas Carrying-case, one Korona Holder but no Tripod or Lens.

The Case for the Korona View is square to hold the camera, three holders and the lens.

			61 x 81	8 x 10
Korona View without Lens and Shutter,	,		\$ 22 00	\$ 24 00
Korona View with Symmetrical Lens and Shutter,			45 00	55 00
Korona View with Rectigraphic Lens and Shutter,			50 00	60 00
Korona View with Turner-Reich Lens and Shutter,			105 00	125 00

Our Lenses are well known as of the best quality in the various grades, and have for years been used extensively by the largest camera manufactures, and in the higher grades purchased by many discriminating photographers. We admit no superiors in Lens making, and with the best possible plant, acquaintance by long experience with the proper optical glasses, and the highest grade of skill, we confidently expect to keep in the front rank. The public should not confuse our instruments with those offered by concerns which do not make Lenses, but merely purchase in the market. We are the manufacturers.

### The Turner-Reich Anastigmat Lens

The introduction of Anastigmatic Lenses marks an epoch in the history of photographic lenses. That they are immensely superior to any of the older style lenses cannot be doubted. After an elaborate series of calculations and experiments, our Turner-Reich Anastigmatic Lens was produced, and the experience of four years has fully justified our claims as to its quality and superiority. It has advantages over any other anastigmatic lens in the market.

The astigmatic errors in these lenses are entirely corrected and they can be used with the full aperture, so that for the given size of plate they need not be diaphragmed, and the image will be as sharp on the edge as in the center.

The field is absolutely flat for the size of plate covered.

The combinations of the Series III and IV are symmetrical, and either combination, used alone, gives a beautiful image. In fact, a single combination of this lens works to the very finest advantage as a single lens.

The glasses used are from the Jena factories, and are of the very finest quality.

Owing to the peculiar nature of one of the glasses used, it is impossible to obtain it free from a few small bubbles, which do not, however, injure the working of the lens.

The combinations of the Series II-S are of different focal lengths and each single combination has been corrected for use as a single lens.

The lenses are mounted in brass, and are fitted only with Iris diaphragms.

The full opening of these lenses is F:7.5, and with that opening they will cut the size plate claimed. With smaller openings, plates one and two sizes larger are fully covered.

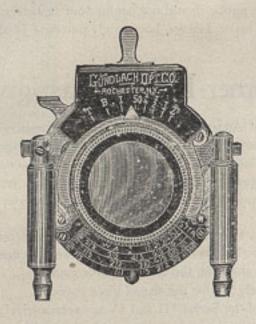
Not only does the Turner-Reich give a flat field with exquisite definition, but it possesses remarkable depth of focus.

This lens is the only anastigmat lens which has been invented and is controlled in this country. All others are of European origin, and are controlled by European concerns.

This lens was patented in the United States, May 14, 1895, and patents in principal European countries have since been granted.

### Series II-S—Turner-Reich Convertible Anastigmat, F:7.5

With Iris Diaphragm



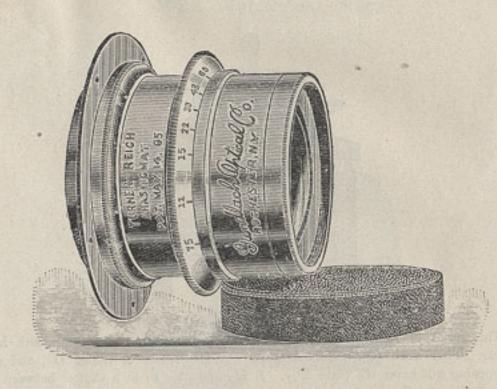
This series of the Turner-Reich Anastigmat is constructed on the convertible form. Each single combination is of different focal length and is corrected for use as a single lens.

The price includes shutter. The 4 x 5 and 5 x 7 are mounted in our New "Model D" Shutter, but the other three sizes are mounted in "Model C" Shutter, page 36.

No.	Size of Plate	Equiv. Focus	Focus of Back Lens	Focus of Front Lens	Price
1	4 × 5	6 in, 7½ '' 8½ '' 10½ '' 12 ''	11 in.	14 in.	\$ 41 00
2	5 × 7		12 ''	18 "	55 00
3	5 × 8		16 ''	18 "	70 00
4	6½ x 8½		18 ''	24 "	90 00
5	8 × 10		21 ''	28 "	105 00

### Series III—Turner-Reich Anastigmat, F:7.5

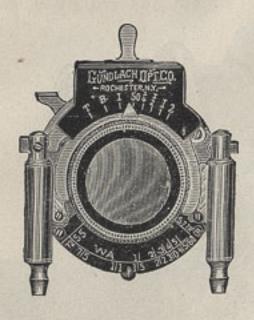
### With Iris Diaphragm



No.	Equiva-	Diam.	Plate	opening of	with	Price with	Price with
10.	Focus	Lenses	F:7.5	F:15	F:60	Brass Mounting	Aluminum Mounting
1	6 in.	‡ in.	4 × 5	5 x 7	5 x 8	\$ 35 00	\$ 38 00
2	71 "	I "	5 x 7	5 x 8	61 x 81	40 00	44 00
3	7± " 8± "	11 "	5 x 8	61 x 81	8 x 10	50 00	55 00
4	101 "	14 "	61 x 81	8 x 10	IO X 12	75 00	80 00
5	12 "	15 "	8 x 10	10 x 12	11 x 14	85 00	90 00
3 4 5 6	14 "	2 11	10 x 12	11 x 14	14 × 17	110 00	115 00
	17 "	21 "	11 x 14	14 x 17	17 x 20	160 00	166 00
7 8	21 "	3 "	14 × 17	17 x 20	18 x 22	250 00	257 00
9	26 "	34 "	17 x 20	18 x 22	22 x 25	350 00	358 00

### Series IV-S—Turner-Reich Anastigmat, F:7.5

Mounted in Shutter

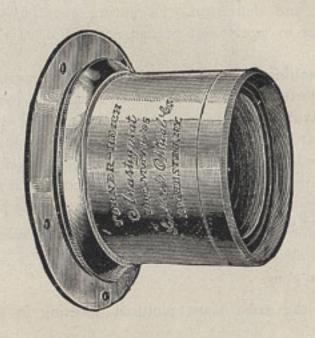


This series of Anastigmat Lenses is constructed especially for use with hand cameras. They work with the same aperture as the lenses of Series III, and with that opening will cover the plate fully. It is impossible to fit a shutter between the lenses of Nos. I and 2, of Series III, hence the lenses of Series IV are constructed to accommodate a shutter between them. Their construction does not admit of covering so large a plate as the Series III lenses, but the light circle is fully large enough to cut sharply the plates for which they are listed, and on those plates we guarantee them to be fully equal to the lenses of Series III, and being intended for hand cameras the smaller light circle is no objection. The price given above includes the lens fitted to the shutter, with iris diaphragm—thus combining the finest and most compact shutter and best lens in the market.

No.	Equivalent Focus	Plate Covered with F:7.5	Price, including Shutter
1	6 in.	4 x 5	\$36 oo
2	71 "	5 x 7	45 00

### Series V--Turner-Reich Anastigmat Process Lens

With Waterhouse Stops



No.	Diameter of Lens	Plate	Focus	Price
ī	Il in.	10 x 12	12	\$65 00
2	2 "	16 x 18	18	125 00
3	25 44	18 x 22	24	180 00
4	25 " 38 " · ·	22 x 25	30	275 00

### The Rectigraphic and Perigraphic Lenses

Have been before the public for many years, and their merits are so well known that we need not enter into a lengthy discussion of them. We may say, however, that we have recently made some changes in their construction which have greatly improved their general performance.

The lenses are perfectly achromatic and rectilinear, and of superior covering power and definition. Excepting our Turner-Reich Anastigmat, no lenses in equivalent grades are equal to these in general excellence.

The two combinations are of different focal length, the back lens having much shorter focus than the front lens, and the relative curvatures are so calculated as to secure perfect optical symmetry of the compound, and at the same time to form perfect achromatic and aplanatic objectives for themselves if used singly. This novel plan offers the important advantage that these lenses, in fact, consist of three objectives of different focal lengths, in the following approximate proportions:

Equivalent of compou	ind	(be	oth	L	ense	es),						2
Back Lens alone, .								+			+	3
Front Lens alone, .		1								7		4

thus giving, on the same plate, pictures differing in size about as 2

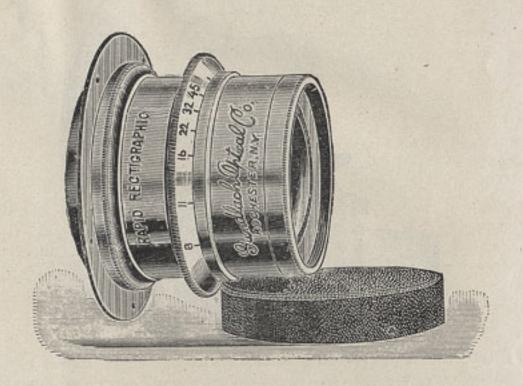
The exceeding utility of this arrangement is more apparent, in hand camera use, when the lens is mounted into a camera with sufficient bellows capacity-as, for instance, our Korona Long-Focus instrument. The photographer is often enabled to obtain a satisfactory view of an object at a distance which, with the ordinary combination, is almost entirely lost.

To use the back lens alone, the front lens should be removed. To use the front lens alone, the back lens is to be removed and the front lens screwed into its place; i. e., the place of the back lens. The focal length of the compound and of each combination are engraved in the

mounts.

### Series VII—Rapid Rectigraphic

With Iris Diaphragm

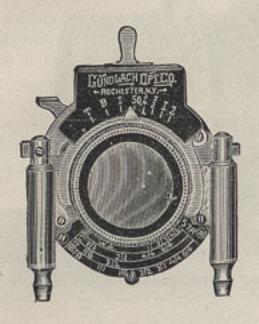


No.	Size of Plate	Diam, of Lenses	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	Price with Iris Diaphragm
0	3½ x 4½	13 in.	5 in.	8 in.	11 in. 13½ "	\$ 14 00 18 00
I I1/2	4 x 5 41 x 61	11 "	61 "	11 "	14# "	20 00
18	5 x 7	13 "	8 "	121 "	17 "	22 00
2	5 x 8	14 "	81 "	131 "	10	24 00 30 00
3	6½ x 8½ 8 x 10	14 "	11	201 "	23 "	38 00
4 5	10 x 12	2 "	13 "	251 "	34 "	45 00
5	11 x 14	21 "	184 "	291 "	391 "	60 00
7 8	14 x 17 17 x 20	2½ " 3½ "	22 "	34 <sup>‡</sup> "	47 " 56 "	85 00

Nos. o and I can be had in matched pairs at an additional cost of \$2.

### Series VII-S-Rapid Rectigraphic

Mounted in Shutter



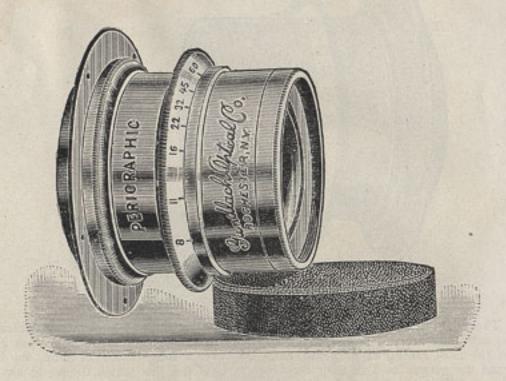
The Nos. 2, 3, and 4 Lenses are mounted in the "Model C" Shutter, page 36.

No.	Size of Plate	Diam, of Lenses	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	Price, includ's Shutter
I I = 1 = 1 = 2 2 3 4	4 x 5 4½ x 6½ 5 x 7 5 x 8 6½ x 8½ 8 x 10	I in18 "  13 "  14 "  14 "  14 "  14 "	6½ in. 7 " 8 " 8½ " 11 " 13 "	10 in. 11 " 12½ " 13½ " 17 " 20⅓ "	13½ in. 14½ " 17 " 18 " 23 " 28 "	\$23 00 25 00 27 00 29 00 35 00 43 00

Only the above sizes of the Rectigraphic are supplied with Shutter,

### Series VIII—The Perigraphic

### With Iris Diaphragm



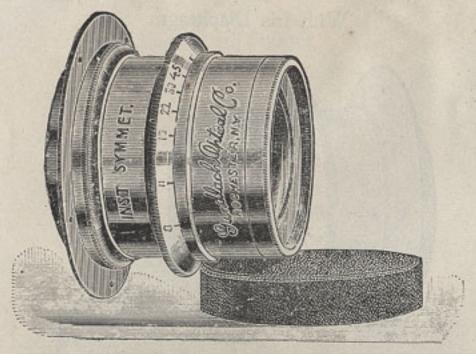
This lens has the same general construction as the Rectigraphic Lens, but is in effect a wide-angle lens. The combinations may be used singly with good effect, differing as do those of the Rectigraphic Lens, for description of which see page 26.

No.	Size of Plate	Diam. of Lenses	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	Price
0	4 × 5	½ in.	3‡ in.	5½ in.	8 in.	\$18 00 26 00
2	5 x 7 6½ x 8½	1 1 6 "	5 " 6‡ " 8½ "	10 "	131 "	30 00 35 00
3 4	8 x 10 10 x 12	118 "	11 "	13½ " 17 " 20½ "	23 "	42 00 52 00
5	11 x 14 14 x 17	21 "	16 "	25± " 29± "	34 "	64 00
7	17 x 20	3 1 "	184 "	29‡ "	391 "	90 00

Nos. o and I can be had in matched pairs at an additional cost of \$2.

The sizes from I to 3 inclusive, of this lens can be mounted in the Korona Shutter, if desired, at an additional cost of \$5 each, in which case the original barrel is not furnished.

### Series IX—Instantaneous Symmetrical

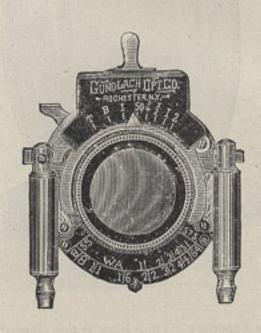


These lenses, as the name implies, are made after the well known "symmetrical" plan, and they are not surpassed by any lens in the market made after that plan. After the most careful experiments, extending over a long period of time, we have selected the glasses used in their construction from the best which the world has yet produced. The glasses are of a high grade and expensive variety, and make possible the correction of chromatic and spherical aberrations to as high a degree as has yet been obtained in photographic lenses. The lenses are not cheap in any sense of the word, except as to price, which latter is very low. In addition to using the very finest glass, the best workmanship is put into their construction. We claim that these lenses are as fine as it is possible to make a lens on the symmetrical plan, and we are anxious to have them compared with lenses of the same style, of any other make, regardless of price. Iris diaphragms are now supplied with these lenses.

No.	Size of Plate	Diam, of Lenses	Equivalent Focus	Price.
I	4 × 5	r in.	6} in.	\$10 00
14	5 x 7	1,3 "	8 "	15 00
2	5 x 8	11 "	81 "	18 00
3	6½ x 8½	14 "	II "	22 50
4	8 x 10	18 "	13 "	28 00
5	IO X I2	2 "	16 "	40 00
6	11 x 14	21 "	181 "	52 00
7	14 x 17	24 "	22 "	70 00
7 8	17 x 20	31 "	26 "	80 00

### Series IX-S-Instantaneous Symmetrical

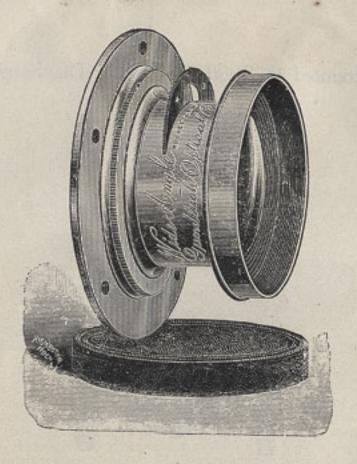
### Mounted in Shutter with Iris Diaphragm



The Nos. 2, 3, and 4 Lenses are mounted in the Korona Shutter, page 36.

No.	Size of Plate.	Diam, of Lenses	Equivalent Focus	Price with Shutter
I	4 × 5	I in.  11 % "  14 "  11 % "  14 "  15 "	6½ in.	\$13 00
III	5 × 7		8 "	18 00
2	5 × 8		8½ "	23 00
3	6½ × 8½		11 "	27 50
4	8 × 10		13 "	33 00

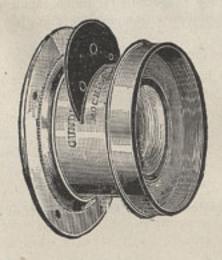
### Series X-Wide-Angle Lens



The extreme angular aperture of this Lens is the especial feature for which we recommend it to the photographic public. It is absolutely rectilinear, and possesses in so far as any lens of extreme angle can, the qualities which have won so much favor for our other lenses. It is provided with rotating stops. Its angle is fully 100°. These lenses cannot be mounted in a shutter.

No.	Size of Plate	Diameter of Lenses	Back Focus	Equivalent Focus	Price
1 2	5 x 7	in.	3 in.	3 in.	\$24 00
3	6½ x 8½ 8 x 10	1 "	48 "	48	30 00
4	IO X 12	17 "	6 "	518	35 00 40 00
5	11 x 14	I 41	65 "	71 "	47 00
0	14 x 17	2 "	8½ "	9. "	55 00
1	17 x 20	28 "	10 "	1015 "	80 00

### Series XI - Wide-Angle Symmetrical Lens



This is a fine wide-angle Lens, made on the symmetrical plan, and will give good satisfaction. We can strongly recommend it for quality, and it sells at a very low price. It embraces an angle of from 80° to 85°, and for a wide-angle is very rapid. It is fitted with rotating stops. This series of wide-angles lens may be mounted in shutters or supplied in cells.

No.	Size of Plate	Equivalent Focus	Back Focus	Price
1	4 x 5 in.	4 in.	3½ in.	\$ 9 00 12 00
2	5 x 7 " 6½ x 8½ "	51 "	THE	
3	8 x 10 "	8 "	5½ " 7¼ "	15 00 18 00

### Price-list of Caps, Diaphragms, Etc., for the Rapid Rectigraphic and Perigraphic Lenses

	0	I	2	3	4	5	6	7	8	
Flanges Diaphragms	\$0 35 70 30 30	\$0 45 80 35 35	I 20 40	\$0 75 1 75 45 45	\$1 00 2 25 50 50	\$ 1 30 2 75 65 65	\$1 60 3 40 75 75	\$2 50 5 75 1 25 1 25	\$3 00 6 75 1 50 1 50	

### Single Achromatic Lenses

These lenses are constructed especially for photographic purposes, and consist of a positive crown-glass lens combined with a negative flint-glass lens, corrected for actinic light,

The following prices are for lenses unmounted:

2	in.	diameter,	41	in.	focus,			13		13		\$0 5	0
~	- (4	1.6	5		44								
I	46		-	**	- 44							5	
14	**	- 11										8	
Il		**										1 6	
11						4						2 0	0
-		"				-						2 0	0
21		"	10	46	"							4 5	

Special prices will be quoted on these lenses to dealer or manufacturers desiring to use them in quantities.

### Single Achromatic Lenses, Mounted

These lenses are mounted in a nicely finished and lacquered brass mount, which is provided with a rotating diaphragm, and is also fitted with a morocco cap.

No.	Size of Plate	Focus	Price
1	2½ x 3½ inches	5 inches	\$2 75
2	3½ x 4½ "	5½ "	3 00
3	4 x 5 "	6 "	3 25
4	5 x 8 "	9 "	4 50
5	6½ x 8½ "	12 "	5 50
6	8 x 10 "	14 "	7 50

### Double Convex Finder Lenses

These lenses are of the best quality, accurately centered so that the optical axis is concentric with the edge and the surfaces.

No.	Diameter	Focus	Price
1	8 inch	\$\frac{8}{4}\$, \$I\$, \$I\frac{1}{4}\$ inch \$I\$, \$I\frac{1}{4}\$, \$I\frac{1}{2}\$ "' \$I\frac{1}{2}\$, \$2\$ "' \$2\frac{1}{2}\$, \$3\$, \$3\frac{1}{2}\$ "' \$3\$, \$4\$ "'	\$0 19
2	1 ''		20
3	8 ''		25
4	8 ''		30
5	4 ''		35
6	7 ''		40

### Korona Shutter

### With Iris Diaphragm "Model B"

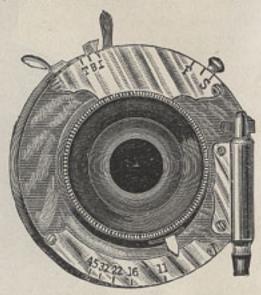
Our "B" Shutter is more simple in construction and operation than our other Shutters. It is made in two sizes 4 x 5 and 5 x 7, and only in combination with an Iris diaphragm, the price including both the diaphragm and the Shutter.

The setting of the Shutter does not open the blades, so there is not the slightest danger of exposing the plate before the bulb is pressed. It is arranged so that it can be released by pneumatic pressure with the bulb, or by hand in pressing the lever. The index over the letters I. B. T. controls the action as to time, instantaneous, or bulb exposure. With the instantaneous exposure, one pressure of the bulb is all that is required, while with the time exposure the first pressure opens the Shutter and the second closes it. When the index is set at B, the Shutter will remain open as long as

the bulb is kept under pressure. This feat, ure is original with our Shutter, and is of especial value in making very short time exposures, where it would be impossible to give two pressures to the bulb without making too long an exposure.

The operation of the Shutter results in no jar, even at the highest speed, and the plate is fully exposed for the time desired, in sharp contrast to these Shutters which take up much of the specified time for the movement of their blades.

The graduation on the diaphragm plate is in accordance with the system of the British Society; the number indicates the f value of the opening.



#### PRICES OF THE KORONA SHUTTER "B."

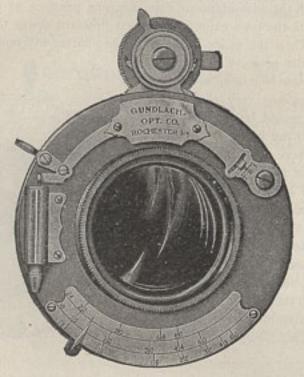
No. 1, 4 x 5,		 	 			\$7 00
No. 2, 5 x 7,						

### Korona Shutter

### With Iris Diaphragm "Model C"

Our Korona Shutter is very simple in construction and operation. It is exceedingly compact and has all the essential features of an up-to-date Shutter. It is light, durable, and of simplest possible mechanism. It is made in three sizes, ranging from 5 x 8 to 8 x 10, and only in combination with an iris diaphragm, the price including both the diaphragm and the Shutter.

The setting of the Shutter does not open the blades, so there is not the slightest danger of exposing the plate before the bulb is pressed. It is arranged so that it can be released by pneumatic pressure with the bulb, or by hand in pressing the lever. The disc at the top of the Shutter controls the length of exposure from  $\frac{1}{4}$  to  $\frac{1}{100}$  of a second.



No.	When fitted to lenses of our own manufacture without extra barrel	When fitted to lenses of our own manufacture with extra barrel	When fitted to lenses of other manufacture leav- ing barrel intact.
3-5 x 8	\$10 00	\$10 50	\$10 00
4-6½ x 8½	10 00	10 50	10 00
5-8 x 10	13 00	13 50	14 00

### Korona Shutter

### With Iris Diaphragm "Model D"

Our new "Model D" Shutter is light, durable, and of simplest possible mechanism. It is made only in two sizes, 4 x 5 and 5 x 7, and only in combination with an Iris diaphragm.

Setting the shutter does not open the blades, so that there is not the slightest danger of exposing the plate. It is arranged so that it can be released by pneumatic pressure with the bulb, or by hand in pressing the lever. It works automatically from  $\frac{1}{100}$  of a



second to 2 seconds. It gives Time or Bulb exposures of any duration. When the index is set at B, the Shutter will remain open as long as the bulb is kept under pressure. This feature is original with our Shutters, and is of especial value in making very short time exposures, where it would be impossible to give two pressures to the bulb without making too long an exposure,

There is no jar, even at the highest speed, and the plate is fully exposed for the time desired, in sharp contrast to these Shutters which take up much of the specified time for the movement of their blades.

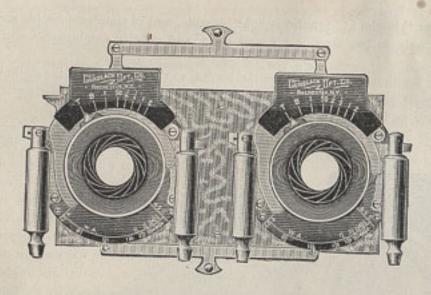
The graduation on the diaphragm plate is in accordance with the system of the British Society; the number indicates the f value of the

opening. Where the plates are graduated with a second series of numbers, as, 1, 2, 3, etc., they do not refer to the focus of the lens, but are only to be used to indicate a change in the size of the opening, when using the W. A. Lenses. The diaphragm plates are marked with the f value of the various combinations of the lens system.

No.	When fitted to Lenses of our own manufac- ture without extra barrel	When fitted to Lenses of our own manufacture with exrra barrel	When fitted to Len- of other manufac ture, leaving barrel intact		
1-4 x 5	\$8 00	\$8 50	\$9 00		
2-5 x 7	8 00	8 50	9 00		

### Korona Stereo Shutter

### With Iris Diaphragm



We have arranged for Stereo use two of our "D" Shutters so that they work simultaneously.

Both Shutters are set at the same time without opening the blades, so that there is not the slightest danger of exposing the plate. It is arranged so that it can be released by pneumatic pressure with the bulb, or by hand in pressing the lever. It works automatically from  $\frac{1}{100}$  of a second to 2 seconds. It gives Time or Bulb exposures of any duration. When the index is set at B, the Shutter will remain open as long as the bulb is kept under pressure. This feature is original with our Shutters, and is of especial value in making very short time exposures, where it would be impossible to give two pressures to the bulb without making too long an exposure.

The centers are 31 inches apart.

The operation of the Shutter results in no jar, even at the highest speed, and the plate is fully exposed for the time desired.

The graduation on the diaphragm plate is in accordance with the system of the British Society; the number indicates the f value of the opening.

#### PRICE, \$15,00.

The Stereo Shutter may be fitted with any of our 4 x 5 Turner-Reich, Rectigraphic, Instantaneous Symmetrical or Single Achromatic Lenses.

### Tripods

Our No. o Sliding Tripods are made of straight-grained spruce, carefully selected

for strength and lightness; are very compact.

No. o compact, spruce, . . \$1 50



Our No. 1 Tripods can be adjusted from three feet up to four and one-half feet high. The great annoyance of legs becoming separated when tripod has camera attached is ingeniously overcome by the pin-locking arrangement which holds its legs firmly together.

Our No. 2 Tripod can be adjusted from three feet to four and one half feet high. It has the pin-locking arrangement holding the legs firmly together. The No. 2 is much stronger and heavier, for use with 6½ x 8½ or 8 x 10 cameras.

No. 2, . . . . . . . \$3 50

Korona Plate-holders



These plate-holders are made of the finest selected cherry, and are provided with press-board or hard rubber slides.

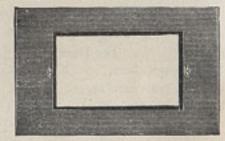
Press-board: 4 x 5, \$1 00 5 x 7, \$1 25 6\frac{1}{2} x 8\frac{1}{2}, \$1 60 8 x 10, \$2 00 Press-board: 4 x 5, 75 5 x 7, 1 00 6\frac{1}{2} x 8\frac{1}{2}, 1 25 8 x 10, 1 50

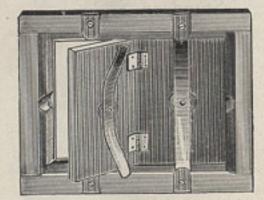
#### Hard Rubber or Press-board Plate-holder Slides

Hard Rubber:  $4 \times 5$ , \$0 20  $5 \times 7$ , \$0 25  $6\frac{1}{2} \times 8\frac{1}{2}$ , \$0 30  $8 \times 10$ , \$0 50 Press-board:  $4 \times 5$ ,  $15 \quad 5 \times 7$ , 20  $6\frac{1}{2} \times 8\frac{1}{2}$ , 25  $8 \times 10$ , 40

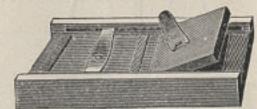
#### Kits

These are made so that a smaller size of plate can be used in a plate holder.





#### Korona Printing Frames



Korona Special Printing Frames

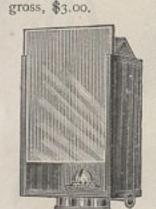
(	31	x 4½, x 5, x 7,					\$0	25
3	4	x 5,						25
1	5	x 7,						50

### Compact Candle Lamp

This compact Candle Lamp is a new lamp made by ourselves and having several new features. It is without question the best candle lamp now on the market for the money. It has perfect ventilation and gives a good volume of light,

Price, No. 0, . . . . . . . . . . 30c.

Fire Bug Candles for Candle Lamp, per dozen, 30c, per



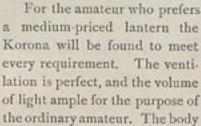
No. 1.

The Korona Lamp No. 1

Is a good, low-priced lantern. The ventilation is perfect, and the volume of light ample for the purpose of the ordinary amateur.

Price, No. 1, . . 50c.

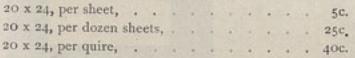
### The Korona Lamp No. 2



is hinged at the back, and can be tilted in order to light the wick. The Korona is the most popular lamp in the market.

Price, No. 2, . . . . . . . . \$1 00

#### Orange or Post Paper For Dark Room Use





No. 2.

#### Standard Scale

For both the professional and amateur photographer this is the best scale. The entire scale is taken apart and packs in the drawer of the walnut stand.

Price, . . . . . \$4 00

#### Pocket Scale

For the amateur the pocket scale is especially designed and well adapted to his use and for weighing small quantities.

5-inch beam, 2-inch brass pans, . 60c. 6-inch beam, 2-inch brass pans, . 75c.





### Folding Negative Racks

No. 1, to hold 24 plates up to  $6\frac{1}{2} \times 8\frac{1}{2}$ , . . . \$0 25 No. 2, to hold 12 plates up to  $6\frac{1}{2} \times 8\frac{1}{2}$ , . . 0 20

### Focusing Cloths

#### Korona Developer

This developer is a combination of both Hydrochinon and Eikonogen, and has the good qualities of both. By this combination the negative will have the detail and softness of the Eiko and the density and brilliancy of the Hydro.

4-oz. bottle will make 12 oz. of Solution, . . . . 25c.

### Korona Developing Powders

These are Metol-Hydro powders for either dry plates or developing papers. They are especially convenient for traveling. One tube will make four ounces of developer.

Box containing 6 tubes, . . . . 50c.



### Korona Toning Solution

This is a combined toning and fixing bath ready for use. Directions for using are on each bottle. An 8 oz. bottle of the Korona Solution will tone and fix about 50 cabinet prints.

4 oz. bottle, will make 12 oz. of Solution, . 25c.

#### Korona Paste

This paste is of the very best quality, and is especially adapted for artists' type papers.

Korona Paste does not sour or mould, and keeps indefinitely.

One-quarter pint jar, . . . 15c. One pint jar, . . . . 30c. One-half pint jar, . . . 20c. One quart jar, . . . . 45c.

Graduated Glasses For Measuring Liquids Minim, \$0										0						Print Rollers								
	-3	1	I	ou	inc	e,	: :				25 20		1	11					o. I				\$0	20
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		4		61			* 10			25 30			111	1				0. 2					35
	2至		8 12	ou	inc	es,					40		-		L	=	3	N	0. 3	,				50.
	الم	)	16		11				. 11		55		No.											
	-		32		44						50		1											
			G	las	SS	Fu	nnels				1		M	east	ırir	19	GI	asse	es	000	70	6	75	
1	pint,						\$e 10	)				2		nces,				\$0		TO THE	6,	4	U	The same
1	66						1:	2 1	F	1115	7			6				фо		MON		3	-	
I	11						15		1	1		4 8							15	DATE		2	- 3	
I	quart,						20		1	1		0		Stall.	+			1	25	TAXABLE		1	8	
2	44						25		L	1										TOTAL DE			12-	



#### Fluted Glass Funnels and Filter

The Fluted Funnel is the best glass funnel made, being very strong. It has glass ribs on the inside, forming passages through which the solution passes quickly while filtering.

1 pint, . . . . . . \$0 15 | 1 quart, . . . . . . . \$0 30

#### Dry Plates

We sell several makes of Dry Plates, among them being Forbes, Stanley, Standard, and Lovell.

									Per Doz.												Per I	Doz
31	x	41					,		80 45	IO	X	12,							١.		83	80
		5			+				65	II	X	14.									5	00
41	X	61,	8.						90	14	X	17,	doub	yle	thie	ck,					0	00
5	X	7		*					I IC	10	X	20,									12	50
		8								18	X	22,									15	50
67	X	81							1 65	34	X	4.	East	ma	n's	Tr	ans	par	enc	y		
8	X	IO						*	2 40	100		Pla	ites f	or	Lar	iter	n S	lid	es,			70

#### Compressed Fibre Trays For Developing, Fixing, or Toning

Fibre Trays are light in weight, yet tough and strong. As they are not affected by the action of chemicals, and are easily kept clean, we recommend them for all purposes. The deep trays have a lip.



40

4 x 5, 5 x 8, 6½ x 8½,				\$0	25 45	\$0	55	8	X	12,	4					\$0 I	50	
4 x 5, .						7.7	n D									80	30	

25 | 8 x 10, .

### Ferro-Prussiate, or Blue Paper

For Making Blue and White Pictures

We now furnish French Satin, Jr., Blue Paper, which is put up in packages guaranteed to keep perfectly for one year in the unopened tubes, but it must be understood that our liability ceases when the tubes are opened and the goods are found in perfect condition. After the package is opened the contents become subject to atmospheric conditions, and their preservation will depend entirely upon the care exercised by the purchaser. Put up in light-tight packages of twenty-five sheets.

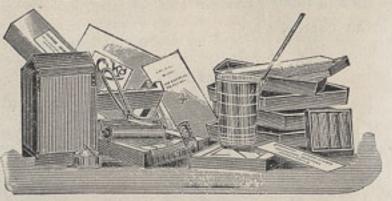
4	x 5, per	package,							20c.
		package,							35c.

#### Ferrotype Plates

Ferrotype Plates have a highly polished surface, and are used for drying Aristotype or Bromide papers when it is desired to have a glossy finish without burnishing. Cannot be sent by mail. 10 x 14 inches, each, 15c.; dozen, \$1.25.

### Complete Developing and Printing Outfits

For the large number of amateurs who prefer not only to "take" pictures, but finish them as well, we have arranged the following complete outfits, comprising the necessary articles for developing the negative and making the print:



#### Outfit No. 1

I Dozen Mounts, I Dozen Negative Envelopes, I Dozen Paper.	Tube Paste, Half Dozen Dry Plates, Printing Frame, Dry Rack, Four Ounce Graduate, Stirring Rod, T Candle Lamp Candle, Print Roller, Package Bron Guide for Be	nide,
4 x 5, price, neatly be	xed, \$2 00	
	xed, 3 25	

#### Outfit No. 2

This outfit contains a greater variety of accessories than No. 1, and a larger quantity of plates, chemicals, etc. It includes:

4 Japanned Steel Trays, 1 Dozen Dry Plates, 1 Glass Graduate, 1 Box Developer, 1 Print Roller,	r Pound Hypo-Sulphite Soda, r Tube Paste, r Korona Ruby Lamp, r Printing Frame, r Dry Rack,	25 1	Dozen Paper, Bottle Toning Solution, Card Mounts, Copy "Guide," Package Bromide.
4 x 5, price, neat	ly boxed,		. \$4 00
5 x 7, price, neat	ly boxed,		. 4 75

### Separate Parts and Supplies

	Bellows	5, 4	,		5	Kor	ona	Cy	cle	and	l F	oldi	ng,								\$2	50
	14	5	,		7	6	6		"	11.		"									3	00
	- 66	6	1 3		84	6			44	66		66									4	00
	44	4	)		5	Serie	es T	VI:	and	VI	I,										3	50
	66	5	,		7	"		"	**	66												50
	- 46	6	1,		81	ü		u	16													50
	- 64	8	- x	10	0	66		16	16	- 44												00
	- 66	6	1 x		81	Com	pac	et a	nd	Vie	w.										6	50
	44		-	10					"	"			40	200	1933							50
	Bulb ar																					50
	Front 1			0030																		25
	"	4			x												-					30
	46	4		- 30			and	1 =	· v 5	Lo		Foc	115									40
	44			- 53		81			1000		-		2005									50
	46					eo,																
	Fronts	for				Ke																40
	ti ti	"	N.S.		-	N	"	na	Cyc		"	101		g,						•		50
	a		5		7		66		66		"							•			100	00
			775	x		di di										*			*		3	50
	44	-14					"		66		"	44									4	00
	**	66					**		66		"										5	00
	**	46	L	ong	F	ocus	4:	x 5	,			**									3	00
	66	46		66		66	5 >	c 7,												4.	3	50
1	Ground	Gl	ass	s an	nd	Fran	mes	, 4	x	5,												50
	"		44		4	6	4	5	x	7,												60
	**		"		4	64		6.1	X	81,			4.5	+							1	00
			46			6	6	8	X	10,						30		2.5			I	25

### Focusing Glass

This lens is an achromatic combination of novel construction, consisting of a double convex crownglass lens and a negative miniscus flint-glass lens, cemented together and mounted in brass, with adjustment to focus. The lens is perfectly aplanatic.

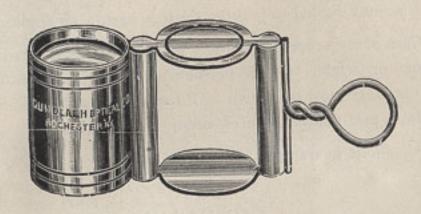
Price, \$3.00.

### Globe Magnifiers

The Globe Magnifier is made after the principle of the globe lens, which consisted of a sphere of crown glass enclosed in two hemispheres of flint glass, and by the principle of its construction the aberrations were corrected to a higher degree than had heretofore been obtained by any other construction. This lens



has an optical axis in any direction, hence the field is perfectly flat and distinct to the outer edges, and, what is true of no other lens, the field is always the largest possible. Pocket magnifiers, made on this principle, are furnished as follows:



No. 290-1	in.	focus,	nickel	-plated	brass	mount,	magnifying	11	diam.,		*	\$5	00
No. 291—4	46	"	16	46		**	16	14	11	+	-	5	00
No. 292—1						11		21	**			8	00
					11	-	11	AT	11			12	00
No. 293-1	**	**						4-					

These lenses have proved very useful in many branches of photography.

### **TERMS**

\*\*\*

The prices in this list are net f. o. b. Rochester.

We will send goods on approval to responsible parties, but where applicants are unknown to us, and no satisfactory reference is given, our terms are strictly C. O. D., and a remittance of at least sufficient for expressage both ways must accompany the order.

We guarantee the safe delivery of goods sent by freight or express, but assume no responsibility for goods ordered sent by mail.

Parties unknown to us and desiring to establish a line of credit will save delay by giving reference with their order.

Discount quoted to jobbers, dealers, agents, on application.

Cash must accompany orders when goods are ordered sent by mail or freight. On all personal checks, 15 cents extra to pay exchange must be added. All remittances should be made by draft, post-office or express order.

All goods guaranteed as represented.

### GUNDLACH OPTICAL CO.

HENRY H. TURNER, PRESIDENT AND MANAGER.

JOHN ZELLWEGER, VICE-PRESIDENT,

J. C. REICH, SECRETARY AND TREASURER.

et.	* *	2
-----	-----	---

### INDEX

aaaa

																		-	"B"
Focusing Gla																			45
Globe Magni	fiers,																		45
Korona Cam	eras –	-																	
Series	I,																		3
"	I-A,																		4
Stereosco	opic,														-				5
Series	I-B,								+										6
"	I-C,																		7
16	II,																		8
** ]	II-A,																4		9
"	II-B,								+							+			10
"	VI,																	II-	-14
"	VII,																+	15-	-16
"	X,																		17
Compact	View	7,		+															18
View,																	4		20
Lenses —																			
Double	Conve	x :	Fin	der	,								4		+				34
Instanta	neous	Sy	mn	netr	ica	1,								**				30-	-31
Rectigra																		26-	-29
Single A	chron	nat	ic,																34
Turner-l	Reich	Aı	nast	ign	nat,													21	-25
Wide-an	gle,														4				32
"																			33
Photographic																			
Lamps,							-												40
Dry Pla	tes,								-										42
Develop																			41
Ferrotyp																			43
Focusing																			41
Funnels	and	Fil	ters	5,															42
Graduat	ed Gl	ass	es,						4										42
Kits, .																			39
Korona									4										39
Orange										*	4	-		140					40
Printing																			39
"	Outf																		43
Scales,										-									40
Toning																			41
Trays,																			42
Tripods																			39
Price-list of	****																		33
Shutters, wit																		35	-38
					-	100												-	1000